

CLAIMS

What is claimed is:

1. In the context of a microwave sensor capable of transmitting a plurality of microwaves of different frequency toward one or more protected areas and capable of carrying out one or more object detection operations based on at least a portion of the microwaves which are reflected from one or more objects at least partially within at least one of the protected area or areas, a microwave sensor characterized in that it is equipped with
 - one or more distance identifying means capable of calculating one or more relative distance or distances from the distance identifying means to at least one of the object or objects at least partially within at least one of the protected area or areas based on at least a portion of the reflected microwaves;
 - one or more moved distance identifying means capable of calculating one or more moved distance or distances per unit time of at least one of the object or objects at least partially within at least one of the protected area or areas; and
 - one or more object determination means capable of receiving one or more outputs from at least one of the distance identifying means and one or more outputs from at least one of the moved distance identifying means, and capable of carrying out one or more object detection determination operations such that one or more moved-distance-per-unit-time value or values, at least one of which serves as trigger value for object detection determination, is or are set lower as at least one of the relative distance or distances to at least one of the object or objects at least partially within at least one of the protected area or areas grows smaller.
2. In the context of a microwave sensor capable of transmitting a plurality of microwaves of different frequency toward one or more protected areas and capable of carrying out one or more object detection operations based on at least a portion of the microwaves which are reflected from one or more objects at least partially within at least one of the protected area or areas, a microwave sensor characterized in that it is equipped with
 - one or more distance identifying means capable of calculating one or more relative

8 distance or distances from the distance identifying means to at least one of the object or
9 objects at least partially within at least one of the protected area or areas based on at least
10 a portion of the reflected microwaves;

11 one or more moved distance identifying means capable of calculating one or more
12 moved distance or distances per unit time of at least one of the object or objects at least
13 partially within at least one of the protected area or areas; and

14 one or more object determination means capable of receiving one or more outputs
15 from at least one of the distance identifying means and one or more outputs from at least
16 one of the moved distance identifying means, and capable of carrying out one or more
17 object detection determination operations such that one or more moved-distance-per-
18 unit-time value or values, at least one of which serves as trigger value for object
19 detection determination, is or are set lower when at least one of the relative distance or
20 distances to at least one of the object or objects at least partially within at least one of the
21 protected area or areas is or are less than or equal to at least one prescribed value than
22 when the at least one relative distance or distances is or are greater than the at least one
23 prescribed value.

1 3. A microwave sensor according to claim 1 or claim 2 characterized in that
2 at least one of the distance identifying means is constituted so as to be capable of
3 measuring at least one of the relative distance or distances to at least one of the object or
4 objects at least partially within at least one of the protected area or areas based on one or
5 more phase differences between or among at least a portion of the microwaves reflected
6 from at least one of the object or objects.

1 4. A microwave sensor according to claim 1 or claim 2 characterized in that
2 at least one of the moved distance identifying means is constituted so as to be capable
3 of receiving one or more outputs from at least one of the distance identifying means and
4 so as to be capable of measuring one or more amounts of change in at least one of the
5 relative distance or distances to at least one of the object or objects per unit time.